

Online Anxiety Treatment Programs: Assessment of Acceptability to Consumers

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Abstract

Online treatment programs are shown to be effective in the treatment of anxiety and can address some of the reasons people do not seek treatment. Little is known, however, about their acceptability, which relates to the seeking out and persistence in a program, by possible consumers, and in particular the acceptability of certain components of the programs. To address this gap in the literature 234 students from the University of Canterbury rated the acceptability of Feedback in a described online program for a hypothetical individual suffering from anxiety. Using the same program and hypothetical individual, 72 students rated the acceptability of accessibility to feedback. Feedback Delay was the only significant variable found to influence acceptability. The program was rated as having medium acceptability and the study suggests that efforts should be made in online anxiety treatment programs to get feedback (of any kind) back to the user within 20minutes as this has the greatest influence on acceptability.

Online Anxiety Treatment Programs: Assessment of Acceptability to Consumers

In New Zealand anxiety disorders are the most commonly experienced group of mental disorders with at least 14.8% percent of adults experiencing some form of anxiety disorder throughout their lifetime (Wells, Oakley Browne, Scott, McGee, Baxter, & Kokaua, 2006). The American prevalence rates for experiencing an anxiety disorder for a minimum of twelve months is slightly higher than New Zealand at 18.1% but similar to New Zealand in that anxiety is the most commonly experienced mental disorder (Kessler, Chiu, Demler, Merikangas & Walters, 2005). Lifetime prevalence rates in New Zealand for anxiety, mood and substance abuse are slightly higher than other European countries (Mental Health Foundation of New Zealand, 2006). In Britain however, 1 in 4 people are likely to experience some kind of mental health concern in any given year (Mental Health Foundation, 2012), compared to 1 in 5 people in New Zealand (Mental Health Foundation of New Zealand, 2006).

Generalized Anxiety Disorder (GAD) is characterised by impairments in many areas of functioning (for example, social and work areas) due to “feeling on edge”, difficulty concentrating, sleep disturbances, easily fatigued and having muscle tension (American Psychiatric Association, 2000). If left untreated anxiety can severely impact on an individual’s life, becoming debilitating if and when it interrupts many facets of an individual’s life (Health Point, 2011). Anxiety has a high comorbidity with depression which can further interrupt an individual’s life and treatment (Gorman, 1998). In Britain mixed anxiety and depression is the most commonly experienced mental health disorder (Mental Health Foundation, 2012). Due to such a high number of people with mental health concerns, mental health services are not able to meet the needs of each individual with traditional face-to-face therapy, which is evident with

only 39% of individual's with a mental health disorder visiting a health service over a 12month period (Mental Health Foundation of New Zealand, 2006).

Many treatments have been effective at relieving symptoms of anxiety (Reevy, 2010; Health Point, 2011). There is a range of treatments and treatment modalities for anxiety, including but not limited to: Cognitive Behavioural Therapy (CBT), relaxation techniques, drugs, group therapy, individual face-to-face therapy (Gale & Oakley-Browne, 2000; Health Point Limited, 2011). Many anxiety sufferers, however, for a multitude of reasons do not seek help. According to Tivot, Andrews, Schwencke, Drobny and Einstein (2008) some of the reasons people with anxiety disorders do not seek treatment are fear of embarrassment for seeking help for a mental-health related issue, lack of awareness of treatment options, lack of money to undergo treatment, inability to travel to treatment and the lack of trained therapists. All of these issues in addition to mental health facilities not meeting demand for traditional face-to-face treatments (Mental Health Foundation of New Zealand, 2012) lead to individuals being unable to find a suitable therapist for their needs.

Fortunately, online anxiety treatment programs offer solutions to the problems that prevent people from seeking treatment. Solutions include lower cost (Marks, Kenwright, McDonough, Whittaker, & Mataix-Cols, 2004), accessibility and anonymity when seeking treatment for psychological afflictions (Proudfoot, 2004). When comparing outpatients from a specialist depression/anxiety clinic with those that signed up to an online therapy program for depression and anxiety it was found that there were few differences between the groups in terms of severity of symptoms, age and gender; this hints that those seeking internet-based therapy may not differ dramatically from those seeking face-to-face treatment for psychological disorders (Titov, Andrews, Kemp, & Robinson, 2010).

Online treatment programs, also referred to as internet-based programs or e-therapy, are programs/treatments delivered to an individual (largely or exclusively) via the internet. Online programs can be either self-help/self-guided offering information and or resources about the disorder with strategies to help decrease the symptoms, or therapist-assisted where the individual is given resources and information about the disorder and advice on how to lessen the symptoms alongside contact with a therapist usually in the form of emails (Anxiety Online). One such treatment program, primarily for depression, is *Beating the Blues* which has been found to be clinically effective and was rated as acceptable by both clinicians, and the public who were assessed after completing the program (Proudfoot, Ryden, Everitt, Shapiro, Goldberg, & Mann, 2004). Impressively, this online CBT based program has been found to be as effective as CBT based face-to-face programs (Cavanagh, Sharipo, Van den Berg, Swain, Barkham, & Proudfoot, 2006). Other trial programs specifically for GAD were also rated as satisfactory by participants and were found to be clinically effective in the treatment of GAD (Titov, Andrews, Robinson, Schwencke, Johnston, Solley, & Choy, 2009). Meta-analysis shows that many internet-based CBT treatment programs for Anxiety and depression are effective (Spek, Cuijpers, Nyklíček, Riper, Keyzer, & Pop, 2006) however, there is little information on the acceptability to possible consumers of such programs (Andersson, 2010).

Operational definitions of acceptability.

Acceptability is an aspect of ‘social validity’ (Wolf, 1978). Social validity is a judgment of three main concepts 1. Significance “*are the specific behavioral goals really what society wants*” 2. Appropriateness “*... do the participants, caregivers and other consumers consider the treatment procedures acceptable*” 3. Importance of effects “*are consumers satisfied with the results...including any unpredictable ones?*”(Wolf, 1978. p, 207). Acceptability—a key aspect of

appropriates—refers specifically “...to judgments by laypersons, clients, and others of whether treatment procedures are appropriate, fair, and reasonable for the problem or client” (Kazdin, p, 493, 1981). Acceptability is of importance as it relates to the ethical nature of the treatment, people’s potential for seeking treatment, initiation of treatment, attrition, and outcome of treatments (Tarrier, Liversidge, & Gregg, 2006; Kazdin, 1980; 1981). An individual’s notion of the acceptability of online anxiety treatments will affect how they will interact with the treatment program and could thereby affect the patient’s compliance, thus altering their recovery outcomes (de Graaf, Huibers, Riper, Gerhards, & Arntz, 2009). Participants in a non-contact, self-help program for depression, known as *Color Your Life*, rated the program’s acceptability, credibility and treatment satisfaction (de Graf et al., 2009). Interestingly, expectancy about the program was positively correlated with improvements in long-term depressive symptoms. This emphasizes the important link between the acceptability of and outcome of a program.

Moreover, acceptability plays a large role in determining whether or not a treatment is ethical. Review boards continually take into consideration both clinical and lay people’s judgments on not only the efficacy but also the acceptability of treatments; especially when the individual does not have a say in the treatments (Kazdin, 1981). Many things influence people’s perceptions of the acceptability of a treatment. In one such study, Kazdin (1981) researched university students’ ratings of the acceptability of various child behavioural treatments. It was found that negative side effects caused by a treatment greatly decreased ratings of acceptability; whereas the efficacy of a program did not influence acceptability ratings. By knowing how modification of particular aspects of online programs can influence participants’ views of acceptability, appropriate modifications can be applied to current anxiety programs.

Current online programs and acceptability.

Online programs currently in use vary from self-help, for example *Ecouch* (2005) to clinician assisted *Fear Fighter* (CCBT Limited, Health Care Online, 2005), and use different media to communicate the content in the modules; for instance marked homework, online forums with other users or clinicians, videos and occasionally videoconferences with a therapist (Himle, et al., 2006; Titov, 2007). Research on the use of email therapy¹ for depression is also underway as a more personalized treatment option compared to clinician assisted online programs (Vernmark, Lenndin, Bjarehed, Carlsson, Karlsson, Oberg, Carlbring, Eriksson & Andersson, 2010). Using CBT in programs is more effective at reducing symptoms than purely self-help informative information about a disorder (Christensen, Griffiths, & Jorm, 2004). Clients in both *MoodGYM*, an interactive CBT program for depression and anxiety, and *Blue Pages*, a self-help information website about depression, had a reduction in symptoms for depression and an increased understanding of what depression is, however, only *MoodGYM* significantly decreased dysfunctional thinking in patients and far fewer people dropped out of the *MoodGYM* program compared to *Blue Pages*.

Perceptions of and satisfaction about the *Fear Fighter* program were rated by completers of the program (Mac Gregor, Hayward, Peck, & Wilkes, 2009). Participants noted that a negative aspect of the program was that there was not enough support/contact with a therapist; on the other hand a positive part of the program was that it could be completed in the comfort of home surroundings and in the participants' own time. Interestingly, clients undergoing an online CBT program with regular videoconferences with a therapist for obsessive-compulsive disorder had high satisfaction ratings about communicating via videoconferencing for therapy (Himle, et al.,

¹ Therapy follows a format similar to face-to-face therapy but is via email and is not accompanied by an online program.

2006). Thus, it is of importance to see which aspects of online programs are seen as most important to users, the public and clinicians in order to refine the program to suit the client's needs and fund programs that will be efficacious.

A survey of 456 health professionals and 649 lay people (Gun, Titov & Andrews, 2011) described how 5% had some previous experience using online treatment programs for anxiety or depression. It was found that acceptability ratings for both lay people and health professional's did not differ, however it was found that both the severity of symptoms (hypothetical for a person who may use the program) and the participants' previous experience with online programs did influence acceptability ratings. The severity of a person's anxiety or depression symptoms would alter people's acceptability ratings for the online program in that people believed online programs were not acceptable for those who had severe anxiety but were acceptable for those with mild or moderate symptoms. Interestingly, participants in the survey with previous experience at using an online treatment program for anxiety or depression had higher acceptability ratings than participants who had never used an online treatment program. Of the participants surveyed, 63% indicated that face-to-face therapy was their preferred modality of treatment compared to 7% preferring online treatment and 29.6% had no real preference for online or face-to-face therapy. Participants who had used online treatment programs before, were amongst the group who preferred face-to-face treatment.

To date, it is apparent that studies on the acceptability of different components of online treatments specifically for anxiety are lacking. With exception of Gun, Titov & Andrew (2011), the majority of studies which mention treatment acceptability are actually commenting on the consumer/participant satisfaction ratings for the program (Cavanagh, Shapiro, Van Den Berg, Swain, Barkham, & Proudfoot, 2009). To help clarify: "*Treatment acceptability refers to*

judgments by laypersons, clients, and others of whether treatment procedures are appropriate, fair, and reasonable for the problem or client” (Kazdin, p, 493, 1981), whereas treatment satisfaction ratings are expressed by clients (and sometimes significant others) and gathered once a client has completed a treatment, so that “*Measures of consumer satisfaction assess the extent to which treatment gratifies the wants, wishes, and desires of clients for service*” (Lebow, p, 244, 1982). Clearly acceptability and client satisfaction are different constructs, although they are related.

Advantages and disadvantages of online therapy compared with face-to-face therapy.

Online programs offer a client some unique advantages over traditional face-to-face treatment delivery. Communication with a therapist online takes the form of using instant messaging through software including MSN messenger², Skype³ and emails. Clients are able to save the exchanged messages in order to refer back to them, to contemplate or refresh their memory of what has been said in their own time (Rehn, 2011). Written advice or instructions about activities (homework) may be taken from a face-to-face session but conversation and advice from a therapist are seldom written down, or, at best, only short notes are taken by the client, reflecting that note-taking may take time away from the session and may impair the interaction between client and therapist. Furthermore, many people may struggle to effectively express difficult experiences or emotions verbally and find it easier to write them down, especially if they have time to think over the wording of what they are trying to say, which can be difficult to achieve in a face-to-face therapy session. Writing about emotional or traumatic events has been

² MSN Messenger is a computer program run via the internet where people can type a message to another person who is logged in to the program at the same time to gain an immediate response.

³ Skype is a computer program which allows its users’ to make video calls, when compatible with the others computer or device, and or phone calls to computers, land lines and cell phones.

found to offer added health and psychological benefits to the person disclosing how they truly feel about an upsetting event (Pennebaker, 1993). Fascinatingly, individuals who use more negative emotional words have larger increases in health and well being (Pennebaker, 1993). The same benefits were found for people writing emails about emotional events in a study of university students (Sheese, Brown & Graziano, 2004).

Regrettably, however, there are still some disadvantages of communicating with someone online via instant messaging or email. A study investigating communication face-to-face versus online between strangers signified how difficult it can be to interpret the meaning of an individual behind the typed words and that many clarifications were needed (Mallen, Day, & Green, 2003). Thus, for the purpose of online therapy the therapist would need to constantly clarify what they were trying to portray to the client and avoid the use of sarcasm and irony etc as facial expressions and voice cues (including tone of voice) are absent and can confuse the listener about what is being said. A possible solution for this lack of visual and audio cues is the use of 'emoticons' (emotion icons), or 'relational icons', created with typographical symbols to resemble facial expressions (Derks, Fischer, & Bos, 2008). A review of online communication and face-to-face interactions was conducted (Mallen, Day, & Green, 2003), and showed that the use of emoticons in email or instant messaging helped the individual clarify to the reader their mood at the time the message was sent, which allowed individuals to communicate more naturally with the use of sarcasm etc being interpreted correctly. Interestingly, when given the option to use emoticons people will use them (Mallen, Day, & Green, 2003), which suggests that people feel the need to explicitly clarify their emotions along with what they are typing.

Surprisingly, participants undergoing psychotherapy via video conferencing or two-way audio on the computer were found to have higher participation levels than those in face-to-face therapy

(Day & Schneider, 2002). There were several reasons offered for this finding including, that people were more comfortable to disclose information when they were not present in person and they took more responsibility for their treatment as they had to work harder to communicate their issues through the technology. This demonstrates how online communication media can be as good, or possibly better for some people, as face-to-face therapy.

A beneficial aspect of online treatment programs to both the clinician and patient is that, in contrast to face-to face therapy, clinician time is saved which reduces the cost to the patient. In a randomized-control trial where participants with phobia or agoraphobia were placed into one of three different treatments (either an online program which was clinician assisted or a face-to-face program which covered the same content as the computer program, and finally a relaxation program) the computerised therapy saved 73% of the time that they would have spent in the face-to-face group (Marks, Kenwright, McDonough, Whittaker, & Mataix-Cols, 2004).

Research is being conducted on the use of email therapy for depression, which in many respects is the closest replication of face-to-face therapy through an online medium. In this research, Vernmark et al. (2010) investigated using email therapy, in which the therapist tailored the CBT content and feedback/support for each individual's needs, as opposed to getting a patient to run through an online program with generic content. The information, guidance, homework, and answered questions are sent by the therapist via email. This combination has many of the benefits of face-to-face therapy, including tailoring content specific to the patient's needs, and benefits of online therapy, such as client anonymity, and the client's ability to read over the session at any time convenient to them.

Online treatments may attract particular groups of people, who would not otherwise seek treatment. The most likely reason for a patient with depression to not seek help was thinking that

they could deal with it themselves (Lang, 2005). Thus people may be more inclined to seek self-help support online when they wouldn't seek face-to-face help. This in turn may stop their problems from escalating to the point where they would need to seek further help from a professional. Online therapy may also provide a window of opportunity for people who are not comfortable disclosing information in person. Patients have been found to disclose more information to therapists through online media than in person which hints towards the acceptability of online treatment programs (Skinner & Latchford, 2006). Individuals who are less likely to disclose information may particularly benefit from using online therapy rather than face-to-face therapy as they may disclose information regarding their problem more freely. Conversely, Rogers, Griffin, Wykle, and Fitzpatrick (2009) found that even though disclosure levels for both online and face-to-face therapy were moderate to high, participants in face-to-face therapy were more likely to express negative emotions including those to do with anxiety, than participants in online therapy. Such discrepancies reinforce the need to assess the acceptability of specific components of online anxiety programs and in particular, investigate specific categories of people who would use online programs.

Many of the online programs currently being used and the trial research conducted for these programs have been rated by participants as satisfactory (Titov, Andrews, Johnston, Schwencke, & Choi, 2009; de Graaf, et al. 2009). Perceptions of and satisfaction with the *Fear Fighter* program was rated by completers of the program in ways that disclosed mixed opinions (Mac Gregor, Hayward, Peck, & Wilkes, 2009). One of the negative aspects of the program was that participants thought there needed to be more support/contact with the therapist but appreciated being able to complete the program in their own time. Interestingly, patients with obsessive-compulsive disorder undergoing an online CBT program with regular videoconferences with a

therapist had high satisfaction ratings about communicating via videoconferencing for therapy (Himle, et al., 2006). Because there are varying reviews on the different aspects of online treatment programs, it is of importance to investigate which of the aspects of any program are currently most acceptable to patients, potential patients and clinicians, especially in regards to anxiety treatments.

To summarize, there is a clear need for acceptability studies to be conducted on individual components of online anxiety treatment programs as satisfaction ratings dominate the literature. Satisfaction ratings are rated retrospectively after completing a treatment, thus, the participant's experience of and the outcome of the treatment biases their ratings (Lebow, 1982; Kazdin, 1980). Satisfaction may therefore be more a measure of how effective the participant believes the program was for them, rather than how acceptable they think the treatment is. High satisfaction is likely to be correlated with acceptability, but acceptability is what influences choice. This current study aims to address the gap in the literature on the acceptability of specific components of online anxiety programs by assessing participants' treatment acceptability ratings using a modified version of Kazdin's Treatment Evaluation Inventory.

Support/feedback is implicated as a vital component in anxiety treatments online.

Spek, Cuijpers, Nyklicek, Riper, Keyzer and Pop (2007) conducted a meta-analysis of randomised-control trials of CBT-based online treatment programs for depression and anxiety. It was found that the programs offering support concurrent with CBT were more effective than those offering no or very minimal support from a therapist. The authors, however, note that further studies need to be conducted to support their findings, as the forms of support and program structures differ considerably from each other. Similar findings were reported in a review by Andersson (2010), namely that online programs offering support were more

efficacious than self-guided therapies and that programs in which the participants were diagnosed and then assigned an online treatment program were the most effective.

It is unclear whether the type of feedback (e.g., monitoring a patient's anxiety levels and informing them via telephone/Skype/emails of their anxiety levels, or a therapist's marking of homework) is the key component keeping participants in the program or influencing the program's efficacy (Buhrman, Fatenhag, & Strom, 2004). But, there is much evidence that feedback on an individual's progress is an important factor in keeping patients on track and finding what is working best for the patient (Lambert & Shimokawa, 2011). Moreover, personalized feedback has been found to increase self-awareness and self-regard which is beneficial to the client's recovery process and personalized feedback is rated by clients as more valuable than generalized or no feedback about a psychological assessment (Allen, Montgomery, Tubman, Frazier, & Escovar, 2003).

Correspondingly, a study involving patients with traumatic brain injury examined the effects of personalized information tailored to patient's specific brain injury/needs compared to generic information about traumatic brain injury (Pegg, Auerlach, Steel, & Buenaver, 2005). Patients who received personalized information had significantly larger cognitive improvements, were more involved in their treatment plan, had higher satisfaction ratings for the treatment as well as a greater sense of control over their recovery process compared to patients receiving generic information. Feedback/support is clearly an important component of therapy relating to clients' outcomes and satisfaction of the program.

Online therapy does not use the same modes of delivering feedback/support to patients as was the case in the above face-to-face therapies and consultations. The following research demonstrates that the delivery mode of feedback is not likely to cause disruption to the positive

effects of feedback. Day and Schneider (2002) focused on psychotherapy delivered via different modes of contact with a therapist. The mode of therapist contact, such as face-to-face therapy, video conference, and two-way audio was found to make no significant difference in the participant satisfaction ratings, closing symptom checklists or assessments of functioning. Mallen, Day, and Green (2003) offer a possible explanation and support for Day and Schneider's findings. They found that there was no statistical difference in peoples' ability to gauge others' emotions in online (instant messaging) or face-to-face interactions. Similarly, when the depth of processing in the form of recall of the conversations up to two weeks later was tested, participants from both online and face-to-face groups recalled the same amount of information from the conversations they had. This highlights that it is not necessarily the mode of delivery that is a key factor, but the type of feedback that is the most vital factor to positive gains found from feedback/support in therapy.

Other trials have been conducted in regards to the different types of support such as clinician-assisted versus technician-assisted online programs for anxiety (Robinson, Titov, Andrews, McIntyre, Schwencke & Solley, 2010; Titov, Andrews, Davies, McIntyre, Robinson & Solley, 2010). Clinician-delivered support consisting of: offering patients advice on the program, their individual needs, answering any questions, and the clinician would also send reminder emails and follow-up phone calls. Technician-support consisted of: the technician with no prior knowledge or experience in working with anxiety patients or health-related matters sending encouragement to participants, reminder emails and follow-up phone calls to stick with the program. If the technician was asked any questions they were not able to offer advice but instead would direct the patient back to certain content in the online program. Patients in both clinician-/technician-assisted programs were found to have demonstrated clinical improvements and at the

end of the program the majority were no longer classified as having GAD. Both programs received high overall ratings of satisfaction by patient completers.

It is also possible that it is not just the type, or level of individualisation of feedback/support that influence the efficacy of the online program, but perhaps it is a combination of individualisation of the program and the feedback/support that contributes to the efficacy of online programs. Email therapy for depression, where the content of the program and feedback was tailored by a clinician specifically to suit the needs of the individual in the program, was compared to a clinician assisted online treatment program for depression (Vernmark, et al., 2010). Both programs reduced symptoms of depression, with the email-therapy group having slightly more participants reaching a level where they were no longer rated as having depression. The authors mentioned that with such a small difference between the two groups it may not be cost effective to run email therapy, as it took clinicians 10 times as long to run the email-therapy than the clinician-assisted online treatment program. It may be argued that since this was an initial study and the clinicians had not engaged in this kind of therapy before, the time taken engaging in email therapy may be reduced with future practice, but it is unreasonable to think the time could be reduced to the level of time spent by clinicians in clinician-assisted online treatment programs.

Smith, Wiggins, and Gorske (2007) surveyed feedback practices amongst clinicians, finding most had positive views around giving feedback to clients, with 75% believing that feedback helped patients understand their problems better which resulted in a very positive client experience. This hints towards the acceptability of receiving feedback/support in therapy as rated by psychologists, but this study is concerned more about what type of feedback is viewed

as most acceptable by the public and possible patients currently undergoing treatment for anxiety.

The literature on the time taken to receive feedback/support is unclear with both positive and negative findings for time-delayed and instant feedback and its effects on learning and self satisfaction (Shute, 2008). Programs currently in use/control trials often attempt to give feedback/support at least once a week with some aiming to reply to emails within 24hours (Almlöv, Carlbring, Källqvist, Paxling, Cuijpers & Andersson, 2011; CCBT Limited, Health Care Online, 2005).

Choice/accessibility in online programs and the importance of a patient's sense of control and involvement in therapy.

As acceptability relates to how motivated and active individuals are in seeking out and participating in programs (Tarrier, et al., 2006), it is possible that programs offering more choice and allowing participants to have more control over and accessibility to certain components in the program may increase the number of people interested in the program, and keep participants motivated to stay in the program. It has been found that when patients play an active role in choosing their treatment or participating and guiding their treatment, their treatment outcomes are enhanced (Dwight-Johnson, Unutzer, Sherbourne, Tang, & Wells, 2001). Of participants who completed an online social phobia treatment program, 32% believed a disadvantage of the program was that the content could not be tailored to suit individual needs/preference for treatment (Titov, et al., 2009). Furthermore, a study of primary care patients with depression found that those who did not receive their preferred treatment, in this case counseling, were less likely to undertake any form of treatment (Dwight-Johnson, et al., 2001). It is clear that choice and treatment preference can considerably affect patients' motivation and participation in

treatment. Through acceptability ratings one can find peoples' preferences for certain aspects of treatment and make these treatments more readily available.

As mentioned earlier, the Pegg, et al. (2005) study illustrates how personalising a treatment can give a client a sense of control and involvement in their treatment, which leads to positive gains in their recovery. It was noted that one way to increase a patient's sense of control and involvement in therapy is to allow patients to set their own therapy schedule. This component of control is important to this study as many of the online programs vary in the degree of patient's ability to control or access certain parts of the program. This thesis will be focusing on the effects on acceptability of a patient's ability to access support/feedback from a therapist as part of the online anxiety treatment program.

Demographics, an important part of acceptability ratings.

For the purpose of this study it is important to find out whether participants have had previous treatment for anxiety because acceptability ratings can be affected by the participant's satisfaction and experience with the previous program experienced (Kazdin, 1980). Interestingly the previous type of treatment sought did not extensively change people's acceptability ratings for patients who used the *Beating the Blues* program according to Cavanagh, et al. (2009).

Other demographic factors to consider are sex, age, ethnicity and computer skills as some of these factors have had mixed outcomes in regards to them affecting acceptability ratings and others have not been investigated in regards to anxiety treatments. A significant difference was found between Caucasian and non- Caucasian participants' treatment acceptability ratings between medication versus behavioural therapy for Attention Deficit Hyperactive Disorder (Krain, Kendall, & Power, 2005). In respect to participant's age, a qualitative analysis of clinician views found that they viewed online CBT programs as more engaging for adolescents

than face-to-face therapy, and believed that adolescents' computer competency would not be a hindrance in the delivery of the program; however, computer competency was of concern for some adult users (Stallard, Richardson, & Velleman, 2010). Similarly, a pilot study of teens using the *Cool Teens* CD-ROM for anxiety were content with the use of multimedia on the CD-ROM to deliver the CBT modules (Cunningham, Wuthrich, Rappe, Lyneham, Schniering, & Hudson, 2009). A study on patients using *Beating the Blues*, found no significant relationship between prior computer use and treatment expectations of the patients or treatment outcomes (Cavanagh, et al., 2009). However, Mallen et al. (2003) showed that the more online experience someone has had makes it easier for them to form online relationships with individuals. This may mean an individual with computer experience may be able to communicate online easier with a therapist than others, which could influence acceptability and outcome of a program.

In a randomized control trial for the following programs *Fear Fighter* (for phobia/panic), *Cope* (for depression/anxiety) or *BTSteps* (for obsessive-compulsive), *Balance* (for general anxiety/depression) computer literacy was assessed through simple questioning of how often a computer was used and whether it was home use or at work. It was found that there was no difference in computer literacy between those who completed the program and those who refused to take part in the program. Surprisingly, computer literacy did not correlate with participant's satisfaction of the program or the patient's outcome (Marks, Mataix-Cols, Kenwright, Cameron, Hirsch, & Gega, 2003). After the program was completed participants were also asked to rate how much of the program they wanted to be delivered by a therapist rather than a computer. The mean rating on a scale from 0–8 was 4.9 (S.D 2.2) which suggests just a slightly larger preference to have more of the program to have been therapist guided.

Cognitive Behavioral Therapy has been long thought of as the leader in anxiety treatments followed closely by medication (Deacon & Abramowitz, 2005). Research has shown that with exception of those who were currently taking medication for anxiety (who perceived medication and CBT as equally acceptable) the majority of patients with anxiety disorders perceive CBT as a more acceptable treatment than medication (Deacon & Abramowitz, 2005). Once again, previous experience is shown to vary perceptions of a treatment's acceptability. With such mixed reviews on the demographic factors which influence acceptability/satisfaction ratings, this thesis will collect data on the following: age, sex, ethnicity, computer competency, treatment history for mental disorders and current mood state.

Aim

Study One

The first study addresses three questions. First, what type of support/feedback is rated by participants as most acceptable? Secondly does the time taken (Feedback Delay) to receive feedback/support alter the acceptability of the type of feedback/support that is given? And thirdly how are the time schedules (Feedback Delay) rated in terms of acceptability? There are four different types of the support/feedback component (Feedback Modality), and three schedules of Feedback Delay by which the hypothetical patient could receive the support/feedback.

The four support/feedback (Feedback Modality) components are:

- *Direct contact (Therapist)* with a therapist through online contact media to ask questions and receive support/feedback.
- *Partial contact (Homework)* with a therapist, via the marking and advice given on homework tasks.

- *Computer generated* (Computer) feedback by plotting participant's mood states/progress on a graph in response to anxiety scales.
- *Online discussion forum* (Forum) with other users of the anxiety program.

The hypothetical interactive online program that was described to participants in this study is a general example of online anxiety programs (derived from typical online programs e.g., *Fear Fighter*, *Mood Gym* and *Phobics–Awareness.org*, 2006-2010). The interactive online program was the same for all of the feedback/support conditions. The content covered by the online program follows similar content to that which is given in face-to-face therapy. Study One also assessed whether the time Delay to receive support/feedback (20 minutes, 24 hours and 7days) altered the acceptability of the type of support/feedback offered in the treatment program. As mentioned above, participants in the *Fear Fighter* program wanted more contact with a therapist (Mac Gregor, Hayward, Peck, & Wilkes, 2009), interestingly it has been found that personalized feedback is more effective than generic feedback surrounding a person's problem (Pegg, Auerlach, Steel, & Buenaver, 2005). Moreover, people have been found to value personalized feedback more than generalized feedback (Allen, et al., 2003). Thus, it is hypothesized that complete contact with a therapist (Therapist) will be rated as the most acceptable treatment condition (Feedback Modality) and that the less individualised feedback (e.g., online discussion Forum) will be rated as less acceptable. It is further hypothesized that the shortest Feedback Delay will be rated as most acceptable and will increase the acceptability of the Feedback Modality component in the treatment program.

Study Two

The purpose of the second study was to assess the acceptability of **accessibility** of a patient to therapist delivered support and feedback. The four accessibility conditions are:

- High accessibility (a patient can contact a therapist via video conferencing, instant messaging, or email at any time and gain an instantaneous response).
- Medium accessibility (a patient can contact a therapist via video conference, instant messaging or email and gain an instantaneous response between 1pm and 5pm on Monday, Wednesday and Friday).
- Low accessibility (a patient must contact a therapist via video conference, instant messaging or email once a week at an agreed time).
- No accessibility (the patient has no contact of any kind with a therapist for support).

Research has shown that, patients who have more control over their treatment are more likely and motivated to take part in that treatment and have better outcomes (Dwight-Johnson, et al., 2001). Pegg et al. (2005) found that one way to increase a patient's interest and sense of control over their treatment was allowing the individual to schedule when their therapy would take place. As acceptability strongly relates to peoples motivation for treatment; it is hypothesized that participants will rate the program with more accessibility to support (e.g., high support) as more acceptable than the programs which offer less accessibility (Low accessibility or No accessibility) to support.

Study One:

Method

Participants

Participants included 234 students from the University of Canterbury (male = 68 and female = 136). Participants were recruited via an email to their university email address informing them of the study and offering a link at the bottom of the email to the online questionnaire.

Participants were invited to enter a prize draw to win one of 12 \$25 grocery vouchers. People

under the age of 18 were not included in this study. Thirty participants' responses were not included in analysis due to partial completion of the questionnaire.

Table 1. Demographics Table of Participants Who Completed the Questionnaire

	Number of participants N	Percentage %
Gender		
Males	N=68	33%
Females	N=136	67%
Age		
18-25	N=173	85%
26-35	N=18	9%
36 and over	N=11	6%
Ethnicity		
European /NZ	N=168	82.3%
Maori	N=9	4.4%
Asian	N=16	8%
Other	N=11	5.3%
Sought professional help for mental health related issues		
Yes	N=69	33.8%
No	N=135	66.2%
	Mean and Standard Deviation SD	Range
Computer ability/use score	48.5 SD= 7	27–60
DASS score		
Depression	10.58 SD= 9.5	0–66
Anxiety	8.65 SD= 7.9	0–44
Stress	14.30 SD= 9.4	0–40

Note. DASS severity ratings. Depression (Normal 0–9, Mild 10–13, Moderate 14–20, Severe 21–27, Extremely severe 28+), Anxiety (Normal 0–9, Mild 8–9, Moderate 10–14, Severe 15–19, Extremely severe 20+), Stress (Normal 0–14, Mild 15–18, Moderate 19–25, Severe 26–33, Extremely Severe 34+).

Design

This study was an online survey analysed in a 4 (Feedback Modality) X 3 (Feedback Delay) design analysis of variance without repeated measures.

Feedback Modality conditions

- 1) Direct contact with a therapist via email, to answer questions and give advice on the next step in the program.
- 2) Partial contact with a therapist, via marking and advice on homework tasks no other therapist contact/support.
- 3) No therapist contact, computer generated feedback is given by plotting the participants mood states/progress on a graph in response to anxiety scales.
- 4) No contact with a therapist, patients gain support through an online discussion forum with other users of the anxiety program.

Feedback Delay Condition

- A) Patient receives Support/feedback in 20mins. For support/feedback modes (support/feedback modes 1, 2, 3, 4)
- B) Patients receive support/feedback in 24hours. (Support/feedback modes 1, 2, 3, 4)
- C) Patients receive support/feedback in 7days. (Support/feedback modes 1, 2, 3, 4)

Measures

The online questionnaire, “The Acceptability of Support/Feedback in Online Anxiety Treatment Programs”, contained two sections. Section one was concerned with the participant demographics including: sex, age, ethnicity, a few questions on previous treatment history for anxiety, questions about participant’s computer abilities (see appendix A), and the Depression Anxiety Stress Scale (DASS 21) (Psychology Foundation of Australia, 2011).

The second section comprised a gender ambiguous case description of a person (Jamie) with moderate-severe anxiety (see appendix B), a description of a generalized CBT online anxiety treatment program (which has been modeled on current online therapy programs including: *MoodGYM*, *Ecouch*, *Phobics-Awareness* (Phobics-Awareness.org, 2006-2010) and *Fear Fighter* (see Appendix C) along with one of 12 different combinations of Feedback Modality and Delay conditions. Each individual participant, therefore, only saw one of the 12 treatment conditions. The four Feedback Modality and three Feedback Delay conditions formed 12 treatment variations. Participants rated the acceptability of the treatment variation they saw as being supplied to the person described in the case study by filling out a modified version of Kazdin's Treatment Evaluation Inventory (TEI) (Kazdin, 1980a; 1980b) as specified in appendix D. The TEI consists of 15 Likert-type response items, responses range from 1 (disagreement with the response item) to 7 (agreement with the response item), thus 1 indicates no acceptability and 7 indicates high acceptability.

When filling out the TEI, participants were instructed to imagine a family member in the same situation as the person portrayed in the case description in an attempt to gain more accurate acceptability by personalising the program. A question regarding the importance of feedback/support offered in the program was placed before the TEI in order to prime participants to think about this particular aspect of the program whilst rating the program in its entirety. Some items in the original TEI were not suitable for this study and were changed e.g., questions relating to giving this treatment to "children" were changed to "young adult".

Procedure

Participants received an email which contained a link to the online questionnaire run by Qualtrics software. They were informed that by clicking on the link in the email message and

completing the online questionnaire they were giving consent to participate in the study, and that they would be unable to remove the information they provided once the questionnaire was completed. The first Qualtrics page informed the participant of the nature of the study, what to expect in the questionnaire and that participation was voluntary and anonymous. Demographic information was collected including: sex, age and ethnicity. Questions were also asked on participant's history of anxiety, computer abilities and current levels of Depression/Anxiety/Stress (as measured by the DASS 21). Participants were randomly assigned by the Qualtrics software to one of the 12 variations of the questionnaire (one of the four Feedback/support Modalities and one of the three Feedback Delay schedules).

Results

Participant's overall acceptability ratings were derived by summing each of their responses in the TEI, with a minimum possible score of 15 and a maximum score of 105. The mean acceptability ratings across participants for each of the Feedback Modality/Delay conditions are shown in Figure 1 and the Means and Standard Deviations are shown in Table 2.

Table 2. Means and Standard Deviations for the Feedback Modality and Feedback Delay Variables.

	Means	Standard Deviation
Feedback Modality		
Therapist	62.1	11.6
Homework	62	11.7
Forum	65.5	12.1
Computer	62.3	12
Feedback Delay		
20 Minutes	66.4	11.4
24 Hours	61.6	12.3
7 Days	60.9	11.1

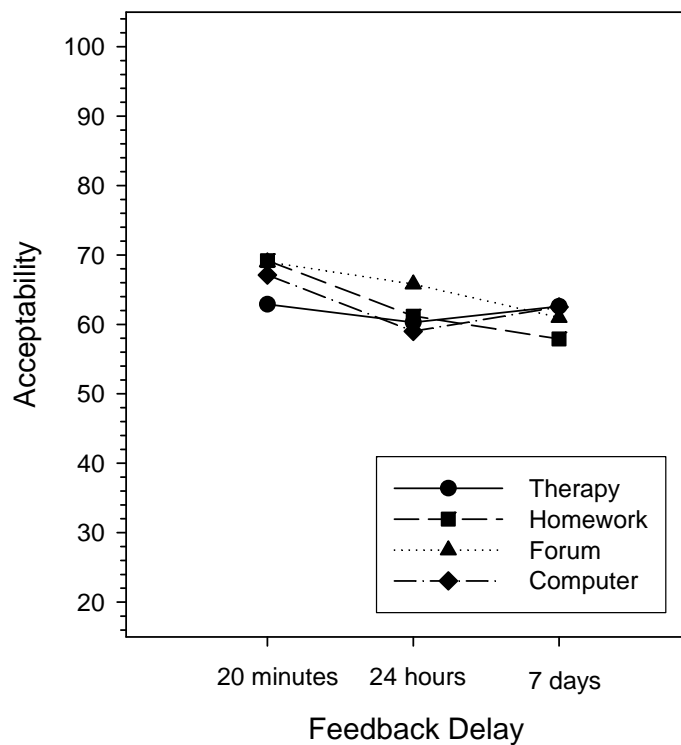


Figure 1: Mean Acceptability as a function of Feedback Modality and Feedback Delay

For 10 out of 12 combinations of Feedback Modality and Delay, acceptability decreased linearly with Delay. This is true for all conditions of Feedback Modality with the exception of Computer and Forum Feedback Modalities which truncated the linear mode trend at the 7day Feedback Delay.

The Homework condition was rated as the most acceptable at 20 minutes followed closely by the Forum condition; however the Homework conditions acceptability steadily decreases with the longer response time to the point of being rated as the least acceptable condition at the 7 day Feedback Delay schedule. The Forum group has a relatively high total acceptability rating over the three Feedback Delay schedules and unlike the other conditions the acceptability of the Forum condition does not drop as steeply to the 24 hour Feedback Delay and is rated as the most acceptable at the 24 hour Feedback Delay then steadily declines in acceptability to be rated as the third most acceptable Feedback Modality at the 7 day Feedback Delay. For all four feedback conditions 20 minutes is rated as the most acceptable Feedback Delay.

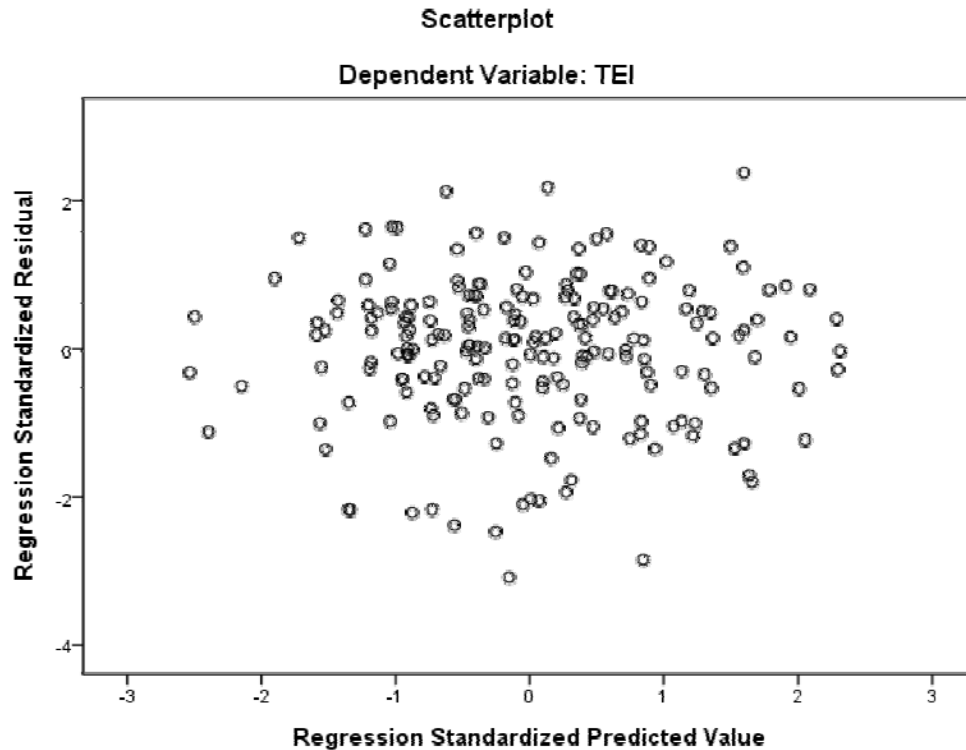


Figure 2. Acceptability Ratings as a Function of Regression Standardized Residual

The individual acceptability ratings were entered into the above scatter plot to test for the assumptions of linearity. The assumptions of linearity have not been violated as can be seen in Figure 2 where the points cluster around 0.

Preliminary analyses were conducted to ensure no violation of the assumptions of multicollinearity, normality, linearity and homoscedasticity. None of the independent variables had a correlation above 0.7. Stress and Depression variables had the highest correlation of $r = 0.598$ (Pearson Correlation). The tolerance of any of the variables did not fall below 0.1 with Stress having the lowest value of 0.453 which indicates that the assumptions of multicollinearity has not been violated. This is further supported in that none of the variables exceeded the Variance inflation factor cut off of 10; with Stress having the highest value of 2.207.

A two-way between-groups analysis of variance was conducted to explore the impact of the type of Feedback Modality/support and Feedback Delay on participants' acceptability ratings for a hypothetical online anxiety treatment program, as measured by TEI. The interaction effect between Feedback Modality and Feedback Delay was not statistically significant, $F(6, 192) = 0.985$, $p = 0.44$. There was a statistically significant main effect for Feedback Delay, $F(6, 192) = 4.75$, $p = 0.01$; however, the effect size was small (partial eta squared = 0.047). Post-hoc comparisons (using Tukey HSD test) indicated that the mean score for the 20 minute Feedback Delay group ($M = 66.47$, $SD = 11.39$) was statistically different from the 24 hour group ($M = 61.63$, $SD = 12.28$) and the mean score for the 20 minutes group ($M = 66.47$, $SD = 11.39$) was statistically different from the 7day group ($M = 60.92$, $SD = 11.07$). The 7 day group did not differ significantly from the 24 hour group. The main effect for Feedback Modality, $F(6, 192) = 0.63$, $p = 0.6$, did not reach statistical significance.

Table 3. Correlations Between Acceptability Scores and Demographic Variables Included in Hierarchical Regression

	Acceptability (TEI)	Sex	Age	Sought treatment	Depression	Anxiety	Stress	Importance of feedback
Sex	0.01							
Age	-0.02	-0.06						
Sought treatment	0.02	0.04	0.06					
Depression	-0.05	0.06	-0.06	0.23*				
Anxiety	-0.11	0.00	-0.01	0.23*	0.52*			
Stress	-0.09	0.03	-0.06	0.30*	0.60*	0.66*		
Importance of feedback	-0.03	-0.13*	-0.05	-0.04	0.06	-0.00	0.01	
Computer ability/use	0.03	-0.09	-0.06	0.09	0.11*	0.15*	0.13*	-0.02

*Note. Significant (1-tailed)**

Table 4. Summary of Hierarchical Regression (Step 2) of Variables and Demographic Factors.

Variables	B	SE	β	T	p
Time	-3.230	1.120	-0.210	-2.883	0.004
Therapy	-0.895	2.338	-0.032	-0.383	0.702
Homework	-0.214	2.246	-0.008	-0.095	0.924
Forum	2.963	2.447	0.101	1.211	0.227
Sex	1.413	1.828	0.056	0.773	0.441
Age	-0.504	1.233	-0.029	-0.409	0.683
Sought treatment	0.599	1.870	0.024	0.321	0.749
Depression	0.049	0.112	0.039	0.438	0.662
Anxiety	-0.176	0.143	-0.118	-1.235	0.218
Stress	-0.087	0.131	-0.069	-0.664	0.507
Importance of feedback/support	-1.041	1.408	-0.053	-0.739	0.461
Computer use/ability	0.084	0.122	0.049	0.688	0.493
R=.269, R ² =.072, Adjusted R ² =.014, R ² Change=.028					

Note. Significant variable in bold.

One question of interest for this study was whether or not psychological factors and demographic factors—i.e., factors other than the experimental Feedback Modality and Delay variables—influenced acceptability. To assess this, first correlations between the demographic factors and the acceptability scores were analysed and are shown in Table 3. Only small correlations amongst some of the demographic factors were found. This was then followed by a hierarchical linear regression. Hierarchical linear regression was used to assess if the variables of sex, age, treatment history and level of depression, anxiety and stress predicted Acceptability Ratings after controlling for the impact of the experimental variables (Feedback Modality and Feedback Delay). Feedback Modality and Feedback Delay were entered as dummy variables at step 1. Only Delay had a significant Beta (Table 4), and together these variables explained 4.5% of the variance in acceptability ratings $\beta = -.178$, $p = .011$. The other eight demographic variables were entered at step 2 and the total variance explained then by the model as a whole was 7.2%. The additional demographic and psychological variables explained an additional

2.8% of the variance in TEI scores after controlling for Feedback and time, [R squared change = 0.714 F change (8,191), $p = .679$]. In the final model only Feedback Delay was statistically significant (Table 4).

A Chi-square test for independence indicated no significant difference between the frequencies of different ranges of Acceptability (TEI) Ratings classified as low = 15–45, medium = 46–75 and High = 76–105 across type of feedback (Therapist, Homework, Forum and computer) (χ^2 (6) = 12.47, $p = .052$). The Therapist feedback group scored the largest total proportion of High acceptability ratings (9.6%) with the Therapist and Homework groups scoring the largest total proportion of low acceptability ratings (2.0%). All Feedback Modalities (combining Feedback Delay and collapsing over Modality) had the majority of Acceptability ratings as medium acceptability. The Forum condition overall was rated as the most acceptable condition.

Table 5. Frequency of Participants Time Taken to Complete the Questionnaire (Range = 3 –768 Minutes)

	Number	Frequency
0–10 Minutes	139	68%
11–20 Minutes	47	23%
21–30 Minutes	4	2%
31–40 Minutes	3	1.5%
Over 40 Minutes	11	5%

Note: The time taken to complete the questionnaire ranged from 3 minutes to 768 minutes with an average time of 19 minutes.

Participants were informed that the questionnaire should take no longer than 40 minutes. Only 5% took longer than 40 minutes to complete the questionnaire. The majority of participants completed the questionnaire within 10 minutes and 91% of participants only took up to 20 minutes to complete the questionnaire which was half, or under, the time assumed participants would take.

Discussion

To recapitulate, it was found that Feedback Delay as experienced in a hypothetical online anxiety treatment program influenced participant's acceptability ratings for the program, independently of the Modality by which feedback was given. The shortest Delay, 20minutes, was rated as the most acceptable and there was no statistical difference between the acceptability of the longer delays of 24 hours and 7 days. Interestingly it was found that the type of feedback/support (Feedback Modality) in a program did not significantly influence participant's acceptability ratings for the online anxiety treatment program. The majority of the participants' ratings for the different feedback conditions fell in the medium acceptability range, with no significant difference between low, medium and high acceptability ratings for all of the four feedback conditions. The Therapist condition received the largest level of high acceptability ratings, with the Homework condition receiving the most unfavorable ratings out of the four conditions. The time taken to receive feedback did not alter the acceptability of the type of feedback/support offered in the program.

The finding that the type of feedback did not significantly alter participants acceptability ratings is consistent with Day and Schneider (2002), and has extended, Robinson (2010). Participants' acceptability ratings of an online program offering support by a trained and registered clinician as opposed to a technician with no knowledge in working with anxiety patients, did not significantly differ (Robinson, 2010). The types of feedback in my thesis (e.g., Therapist, Homework, Forum, and Computer) differed from those in Robinson (2010) and were also shown to not alter participants' satisfaction ratings. The type of feedback having no effect on acceptability ratings is further supported by Day and Schneider (2002) where participants'

satisfaction ratings with different modes of contact with a therapist including face-to-face, two-way audio and video conferencing were not different.

It is possible that many participants were not familiar with online CBT therapy and the successful outcomes it has achieved. This is very likely to have influenced their acceptability ratings. The program described in this study explained CBT and gave an overview of what was covered in each of the 8 hypothetical modules, but there was no information supplied on the ethical nature of the study, nor were participants in the Therapist conditions informed that the therapist would have been a registered psychologist; instead these were left open to individual interpretation so as not to systematically influence the ratings. Participants were also not informed of the efficacy of the online treatment programs as Kazdin (1981) showed that the success of a treatment did not alter participant's acceptability ratings, although it must be acknowledged that Kazdin was evaluating a very different set of treatments, and the universality of his findings should be questioned. Nevertheless, the acceptability ratings may be influenced if this information was supplied. Gun et al. (2011) found that people felt that more information was needed about the online-program's efficacy, availability, ethical/clinical guidelines, legal issues including liability, and the training undergone by the therapists in order to better rate the program. Similarly, university student's ratings for an online CBT program for depression and anxiety increased on measures of credibility, expectancy for improvement and likelihood of use, after they were given a demonstration of the program and CBT (Mitchell & Gordon, 2007).

A possible limitation of this study relates to the appropriateness of using an online questionnaire. Being unable to measure or account for a participant's seriousness/engagement with the task may raise question about the integrity of the data. Nevertheless, as an index of engagement with the questionnaire the non-completion rate of participants was 12.8% which is

fairly low. With a relatively high completion rate, and given the fact that participants were informed about the nature of as well as the length of time the questionnaire could take (40 minutes) and still volunteered to participate, it is reasonable to assume that participants would respond thoughtfully to the questionnaire knowing this information and committing to spend a sizeable amount of their time on the questionnaire. Interpretation of the large range (3 minutes to 768 minutes) in time taken to complete the questionnaire is difficult, especially, because participants were able to save where they were and complete it later, meanwhile the time continues recording. Furthermore, individuals who are familiar with the content and layout of the questionnaire may process the information at a faster rate than someone unfamiliar with the content but both individuals are attending to the questionnaire in a similar fashion. Clearly the time taken to complete the questionnaire does not necessarily relate directly to the individual's attention paid to the questionnaire.

In future it may be useful to have participants rank the acceptability of all of the different types of feedback for the programs as this would be a more sensitive measure to pick up trends of acceptability. It may also be beneficial to not only describe the content of the program but include a small segment where participants could experience the interactive nature of the program. Including a tester of an online program was previously found to increase acceptability ratings of an online program for depression (Mitchell & Gordon, 2007). By making these adjustments it would allow participants who have little knowledge of online programs to truly compare, contrast and rank the acceptability of the different components of an online treatment program.

The overall medium to high acceptability ratings of the Forum condition may reflect the age group of the participants (85% between 18–25 years of age) and their comfort and high usage of

online social networking sites. The Forum condition uses a similar format of synchronous conversation online chat/email (and shows the links of previous conversation and postings) (Tufekci, 2008) like that used in online social networking sites. It is possible that the participants find synchronous online conversation more acceptable than asynchronous (e.g., email where a conversation style is not recorded but individual blocks of statements and response are kept separate) which is the medium used in the Therapist and Homework condition. Online social media sites allow for individuals to express whatever they wish and gain feedback from others in the form of commenting on their status updates. Participants in this study had high levels of both use and comfort using social network sites which suggests that they are familiar with the style of communication used in the Forum Feedback condition. Future research should be aware of this and evaluate it.

Particular social rules around privacy and disclosure of certain types of information exist amongst social network site users (Tufekci, 2008), in that people do not limit the information they disclose, instead they use privacy settings to control how viewable their disclosed information is; for example using code names or limiting access to other users of the same social network site. Thus, participants may have seen the forum style of feedback as acceptable as they would be likely to fully disclose information to and receive feedback from others in the program, whilst maintaining privacy on the site as it is restricted to other users' of the anxiety program and keeping their identity hidden though using their code name for the entire online program. Non-completers of an online program for depression stated that the main reason for leaving the program was because they found it too demanding as the program included individual therapist commentary on homework as well as individual advice along with being expected to take part in an online forum (Anderson, Bergström, Hollände, Carlbring, Kaldö, & Eskelius, 2005). Thus it is

possible that the participants in this study who are familiar with using forum-type websites see this option of gaining advice as less demanding than getting individual feedback from a therapist alone.

Interestingly, it was found that participant's treatment history (whether an individual had sought professional help for a mental health concern) did not significantly alter their acceptability ratings, which is inconsistent with the understanding that previous treatment experience and satisfaction affects people's acceptability ratings (Kazdin, 1980). Out of the 38 participants who indicated that they had sought professional help for anxiety only three indicated that they had sought treatment that was not face-to-face therapy. There was no difference between these two groups' acceptability ratings, consistent with Cavanagh, et.al (2009) who showed that the type of treatment previously sought did not greatly alter participants' acceptability ratings of *Beating the Blues*. This finding is however, inconsistent with Gun, Titov and Andrew (2011) demonstrating that participants who had previous experience in online treatment programs produced higher acceptability ratings for an online treatment program than those who had no experience using online treatment programs. With such a small number of participants who had not had face-to-face therapy it is understandable that further research including a larger group of participants who had experienced an online treatment program needs to be conducted in order to begin to explain such discrepancies in the previous literature.

The case description used in the questionnaire described a gender neutral individual with moderate symptoms of anxiety. Participants clearly rated the program as having moderate (80%) to high (16.4%) acceptability with only 3.6% of the participants rating the program as having low acceptability. This rating ratio was to be expected as similar ratings were given to programs

for an individual described as having mild to moderately severe symptoms in Gun, Titov, & Andrews (2011).

The clinical implications of this study point to the need for online anxiety programs to prioritize feedback in terms of getting it back to users of their program as fast as possible with the optimal time (for maximum acceptability) suggested as being within 20minutes. As the Forum condition received the largest overall rating of acceptability and computer received the most high acceptability ratings (16.4% rated it as having high acceptability out of those assigned to the computer condition), and 20minutes was the most acceptable time schedule a possible way to interpret these findings would be to have an online forum that is monitored and commented on by a therapist who would also ensure that individuals gained a response within 20minutes, as well as having the option of computer-generated feedback. This would combine the need for users to communicate what they are going through and get personalized feedback from other users/therapist whilst being able to monitor their progress through computer generated feedback/support. Both computer generated and forum feedback/support have been shown to be cost effective options as it decreases the time therapists are needed for support/therapy which reduces the cost of the treatment program down (Marks, et al., 2004).

Study Two

Method

Participants

A total of 72 male (18) and female (54) adults over the age of 18 (range 18–45) years were recruited via student email from the University of Canterbury. All participants were supplied with an information page, and consent was implied by participants reading though the information sheet and voluntarily filling out the anonymous questionnaire. Participants were

invited to enter a prize draw to win one of two \$25 vouchers. There were no differences in computer ability between participants. The majority of the participants (58) identified themselves as European or New Zealand European, 5 identified as Maori, 8 as Asian and 1 as 'Other'.

Design

As for Study One, Study Two was a descriptive survey which investigated the acceptability of differences in the accessibility of therapist support in a generalized online anxiety treatment program. In this context accessibility means the degree to which a person can ask questions and gain a response/advice from a therapist via the online anxiety treatment program.

Measures

Study Two used the same measures and layout of "The Acceptability of Support/Feedback in Online Anxiety Treatment Programs" questionnaire, described in Study One. The measures included, questions on participants' computer abilities, the DASS21, the same hypothetical vignette of an individual suffering from anxiety as in Study One, the generalized treatment description based on current interactive online treatment programs (with the added accessibility conditions instead of the Feedback Modality and Feedback Delay conditions in Study One), and the revised version of the TEI. The online program described to participants was the same interactive online program as was described in Study One. The type of feedback/ support for the High, Medium and Low accessibility conditions is the same as the direct contact condition in Study One, where, patients were described as able to ask any questions and receive feedback and support from a therapist via email.

Procedures

Participants were randomly assigned by the *Qualtrics* software to receive one variation of the “The Acceptability of Accessibility to Support in Online Anxiety Treatment programs” questionnaire via the email link. After written instructions on how to fill out the questionnaire and informing the participants that the study was completely voluntary and confidential and that their consent was implied upon filling out the questionnaire, two main sections followed. The first section was the personal information (demographics) section, and the second section consisted of the case description about “Jamie”, the treatment description for Jamie; along with a description of one of the four accessibility conditions, and the TEI questionnaire.

The four Accessibility conditions were:

- High accessibility: a patient can contact a therapist via video conferencing, instant messaging, or email at any time and gain an immediate response.
- Medium accessibility: a patient can contact a therapist via video conference, instant messaging or email and gain immediate response between 1pm and 5pm on Monday, Wednesday and Friday.
- Low accessibility: a patient must contact a therapist via video conference, instant messaging or email once a week at an agreed time.
- No accessibility: a patient has no contact of any kind with a therapist for support.

Results

Participants overall acceptability ratings were derived by summing each of their responses in the TEI, with a minimum possible score of 15 and a maximum score of 105.

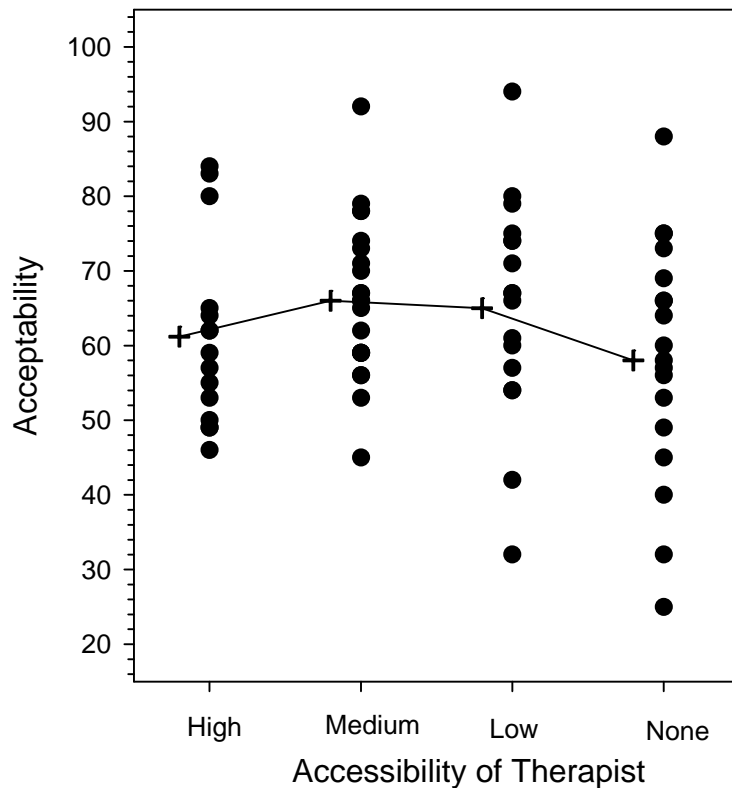


Figure 3: Acceptability as a function of Therapist Accessibility
Points show individual data, + = group mean

Acceptability ratings across participants for each of the four Accessibility conditions are shown in Figure 3, along with the individual total scores for each participant in each condition.

Medium Accessibility was rated as (slightly) the most acceptable followed by Low Accessibility then High Accessibility. As predicted, No Accessibility was rated as the least acceptable condition. The variance was similar to Study One in that it was high for all conditions.

A one-way between groups analysis of variance was conducted to explore the impact of accessibility of feedback/support acceptability ratings. There was no statistical difference found between the four conditions $F(3, 68) = 1.3, p=0.23$ with a small effect size (partial eta squared = 0.05).

Demographic variables thought to influence acceptability ratings were entered into a correlation matrix with acceptability ratings and each other. The variables entered were: sex, age, ethnicity, treatment history, computer ability/use, and scores on depression, anxiety and stress.

Table 6. Correlation Between Acceptability Scores and Demographic Variables

	Acceptability (TEI)	Sex	Age	Ethnicity	Sought Treatment	Depression	Anxiety	Stress
Sex	-0.065							
Age	0.055	0.000						
ethnicity	-0.092	-0.221	0.000					
Sought Treatment	0.008	-0.048	-0.246*	0.064				
Depression	-0.118	-0.071	-0.043	-0.209	-0.365**			
Anxiety	-0.068	-0.134	0.011	-0.069	-0.355**	0.660**		
Stress	-0.183	0.082	-0.007	-0.233*	-0.248*	0.689**	0.786**	
Computer ability/use	-0.075	0.137	-0.160	0.265*	0.020	-0.039	0.039	-.050

Note. Significance indicated by * (one-tailed) and ** (two-tailed)

All correlations between acceptability and the other demographic/ psychological variables were below 0.183 and not significant. This suggests that the demographic variables did not systematically influence the acceptability ratings. As expected there were significant correlations found between the following variables: Sought help and the three psychological variables (Depression, Anxiety and Stress), the psychological variables, and interestingly Ethnicity was correlated with both Computer ability/use and Stress.

Discussion

It was surprising and contrary to the hypothesis that Accessibility to a therapist did not systematically influence acceptability of a therapy program. Although, there was a trend for No

Accessibility to rate as least acceptable of the accessibility conditions, which is consistent with reasonable expectations about the effect of accessibility or its absence.

The lack of substantial differences is surprising. Dwight-Johnson, et al. (2001) established that the more input a patient has, in terms of choices and the ability to guide their treatment, the better outcomes are experienced. Patients who do not have choice or control in their treatment or those who do not receive their preferred treatment were less likely to further seek any treatment at all. Furthermore, Pegg, et al. (2005) claimed one way to increase a patient's sense of control/ involvement in treatment was to allow them to choose the schedule of treatment. Since acceptability relates to an individual's potential treatment-seeking and completion of treatments (Tarrier, et al., 2006) the lack of effect of accessibility on acceptability is surprising.

The absolute Acceptability Ratings for both Study One and two were very similar, with Study One having an average acceptability score of 62.81 and Study Two of 62.92. Study Two (S.D=13.57) had slightly more variability in acceptability than Study One (S.D=11.84). This shows that the general online program for anxiety described in this program was rated as having medium acceptability (The lowest possible rating was 15 with the highest possible rating of 105).

Not only do the findings of this research begin to fill the gap in the literature on the acceptability of online anxiety programs, it also has the potential to inform and begins to shape the existing and future online anxiety programs to better address clients needs.

Future research could be conducted on other components of online treatment programs, not only in the area of anxiety but also for other psychological concerns. The issue of whether or not the hypothetical individual in this study was referred by a mental health/medical practitioner to the online program or if it was a self referral was not investigated. As acceptability relates to

potential seeking of treatments, the question of self-referral to a particular program may be of interest.

In conclusion, participants rated the online treatment program for anxiety as acceptable regardless of the type of feedback/support or the degree of accessibility to feedback/support. What did enhance participant's ratings of acceptability was timeliness in receiving feedback/support, with up to a 20 minute Delay being rated as most acceptable. From both of the studies, the most acceptable model of feedback for an online anxiety program would be to have an online discussion forum possibly monitored by a therapist—to ensure a participant receives a response—, that is updated every 20minutes, with the accessibility to this feedback, or that provided by a therapist, being between 1pm till 5pm Monday, Wednesday and Friday. These findings are encouraging in that the options for feedback, which increases costs and therapist time, are not at the most extreme end of demanding a therapists' time. Thus, the feedback components of the program which are rated as the most acceptable are also in the middle range for cost effectiveness.

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Appendices

Appendix A

Computer Use/Ability

1=I never use this/ No confidence 3=I often use this/adequate confidence 5=I always use this/completely confident.

	1	2	3	4	5		1	2	3	4	5
Using a computer to write documents											
Using the internet for emailing											
Searching the internet for health related information											
Using social networking sites e.g., Facebook, twitter, blogs											
Using the internet for leisure activities e.g., finding music, TV programs, games, or online shopping											
Using two way audio via the internet e.g., Skype											

Appendix B

Case description adapted from http://helpguide.org/mental/generalized_anxiety_disorder.htm

Jamie has always been a worrier, but it never interfered with life before now. For the past 6 months, however, Jamie has been feeling on edge all the time, paralyzed by a continual sense of dread, and constantly worries about the future. Jamie's worries make it difficult to concentrate at work, and make it impossible to relax when at home. Jamie also has sleep difficulties, tossing and turning for hours before falling asleep.

Appendix C

Proposed treatment

Jamie has signed up to a user-friendly interactive online treatment program which has 8 well designed modules, each module takes around 50 minutes to complete. The program has a user code and password so Jamie can access the modules at anytime, take as much time as needed to complete the program and is able to go back and look through the completed modules at any time. The program includes many interactive features including video and audio options. The modules are based on Cognitive Behavioral Therapy (CBT). CBT focuses on the idea that there is a link between our thoughts, feelings and behaviors and it is not just external things, for example, people and situations that cause our behaviors. The online program will teach Jamie how to recognize any anxious feelings/and or negative thoughts that are distorted/negative. At the same time, the program teaches Jamie strategies to help change any negative or distorted thoughts. Ultimately Jamie will learn how to be in control of thoughts and feelings which cause anxiety.

The Modules contain the following topics

Introductory video to the program and information about anxiety including accounts of people with anxiety,

1. Defining and pinpointing your problems. Learning to understand how your thoughts affect your behavior. Homework: Find and take part in a relaxing/pleasurable activity and see how this makes you feel.
2. Understanding how your thoughts affect your behavior, setting goals. Learning how to identify automatic thoughts. Homework: Thoughts, Moods and activities diary.
3. Learning about thinking errors, distraction techniques. Homework: try to use activity scheduling to solve problems, and work on recognizing thinking errors.
4. Challenging unhelpful thinking. Homework: use problem solving techniques instead of activity scheduling and challenge any negative thoughts.
5. Learn to challenge inner beliefs and identify your own success . Homework: continue keeping mood/thought and activity diary and try using both problem solving and activity scheduling techniques to solve problems.
6. Learn more about your success and your attribution style (what you think causes events to happen in life). Learn about Task Breakdown. Homework: have a go at using Task Breakdown strategies.

7. Learn about graded exposure and sleep management techniques to help you tackle problems.
Homework: Record the good and bad things that happen, what you thought caused them and work through the problems using the techniques learned in the program.

8. Receive a summary of all of the techniques in the program, help with planning for your future, setting new goals and tips on staying in control of anxiety.

Appendix D

Modified version of Kazdins TEI

How acceptable do you find this treatment to be for the patient's problem?

not at all acceptable			moderately acceptable			very acceptable

How willing would you be to recommend this treatment program to a member of your own family?

not at all willing			moderately willing			very willing

How suitable is this treatment for people who might have other psychological/emotional problems than those described for this patient?

not at all acceptable			moderately acceptable			very acceptable

Is this treatment suitable for people of any age (childhood to the elderly)?

not at all suitable			moderately suitable			very suitable

How stressful or difficult do you think you would find this treatment?

very bad			moderately			NOT bad at all

Is it acceptable to offer this treatment online to people who are not competent to choose treatment for themselves (such as the intellectually disabled or the confused elderly)?

not at all acceptable to apply this procedure			moderately acceptable			very acceptable to apply this procedure

How appropriate is it to charge money for access to this treatment?

Not appropriate			moderately			very appropriate

To what extent does this treatment program address the patient's needs?

does not address Carrie's needs at all			Addresses Carrie's needs moderately well			Addresses Carrie's needs very well

To what extent do you think there might be risks undergoing this kind of treatment?

--	--	--	--	--	--	--

a great deal of risks are likely	some risks are likely	no risks are likely
--	--------------------------	------------------------

How much do you like the procedures used in this treatment?

do not like them at all			moderately like them			like them very much

How effective is this treatment likely to be?

not at all effective			moderately effective			very effective

How likely is this treatment to make permanent improvements in the patient?

unlikely			moderately			very likely

To what extent are undesirable side effects likely to result from this treatment?

many undesirable side effects likely			some undesirable side effects likely			no undesirable side effects likely

How much discomfort is the patient likely to experience during the course of treatment?

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very much discomfort	moderate discomfort	no discomfort at all
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Overall, what is your general reaction to this form of treatment?

very negative			ambivalent			very positive